Claims

1.   Apparatus for intercepting data communicated between a sender and a receiver, and conditionally altering that data, the apparatus comprising:

(a)   an interception unit, capable of intercepting said communication,

(b)   a memory for storing predetermined device settings,

(c)   access functionality, associated with said interception unit, operable to access data within said intercepted communication, and

(d)   a search and replace unit, associated with both said interception unit and said access functionality, being operable to conditionally alter the intercepted communication in response to said accessed data and said device settings.

2.   The apparatus of claim 1 wherein said access functionality is operable to access a selection from the group consisting of:

(a)sender identification

(b)information about the sender

(c)receiver identification

(d)information about the receiver, and

(e)data type identification.

3.   The apparatus of claim 1, wherein said settings include any one of a group comprising:

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(a)information about data types the apparatus may intercept,

(b)users for whom data should be changed,

(c)data to be changed, and

(d)at least one way in which given data is to be changed for at least one user.

4.   The apparatus of claim 1, said interception unit being connectable to intercept data from a computer network.

5.   The apparatus of claim 4 wherein the sender of data and receiver of the data are respectively remotely located.

6.   The apparatus of claim 4, wherein said computer network is a packet based network.

7.   The apparatus of claim 6 wherein the network is a network selected from the group consisting of a

(a) TCP/IP based network

(b) UDP based transmission

(c) ICMP based transmission

(d) IGMP based transmission

(e) TCP based transmission

(f) mobile device based network

(g) Ipv6 based network

(h) Ipv4 based network

(i) SMP based network.

8.   The apparatus of claim 7 further comprising a message assembler operable to assemble complete messages from assorted packets.

9.   The apparatus of claim 4, the interception unit being locatable on a sending computer.

10.   The apparatus of claim 9 wherein the search and replace unit is operable to determine a structure of input data and to carry out said alteration within the framework of said determined structure.

11.   The apparatus of claim 10 wherein the structure is a text data structure.

12.   The apparatus of claim 11 wherein the structure defines content text, and tag data.

13.   The apparatus of claim 12 wherein the search and replace unit is operable to selectively do one of adding, altering or deleting data found in a selection from data in and around at least one of the group consisting of:

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(a) the text

(b)and tags.

14.   The apparatus of claim 10 wherein the structure is one of a group consisting of:

      (a) the SGML format

      (b) the HTML format

      (c) the XML format

      (d) the XHTML format

      (e) the WAP format, and

      (f) SMTP.

15.   The apparatus of claim 14 wherein the search and replace unit is operable to find a selection from the group consisting of words and tags, and is further operable to do at least one of adding data, deleting data, and altering data that is part of the group of data in and data around that selection.

16.The apparatus of claim 15 capable of selectively doing at least one of adding, removing and altering data around and in the selection, wherein that data consists of at least one of the group consisting of:

      (a)JavaScript

      (b)VB Script

      (c)Ecma Script

(d)links

(e)color

(g)images

(h)sounds

(i)multimedia

(j)fonts

(k)Flash

(l)tags

(m)pop-up menus

(n)pop-up windows.

17. The apparatus of claim 10 wherein the structured data is selected from the group consisting of

(a) image data,

(b) sound data, and

(c) multimedia data.

18. The apparatus of claim 17 wherein the data alteration consists of altering a selection from the group consisting of:

(a) the resolution of the data and

(b) the compression of the data.

19.   The apparatus of claim 4 wherein the interception unit is locatable on a receiving computer.

20.   The apparatus of claim 19 wherein the search and replace unit is operable to determine a structure of input data and to carry out a replacement within the framework of said determined structure.

21.   The apparatus of claim 20 wherein the structure is a text data structure.

22.   The apparatus of claim 21 wherein the structure defines content text, and tag data.

23.   The apparatus of claim 22 wherein the search and replace unit is operable to selectively do one of adding, altering or deleting data found in a selection from data in and around a selection from the group consisting of:

(a) the text

(b)and tags.

24.   The apparatus of claim 20 wherein said structure is selected from the group comprising:

(a) the SGML format

(b) the HTML format

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(c) the XML format

(d) the XHTML format

(e) the WAP format, and

(f) SMTP.

25. The apparatus of claim 24 wherein the search and replace unit is operable to find a selection from the group consisting of words and tags, and is capable of doing at least one of adding data, removing data, and altering data from any of a group comprising data in, and data around said selection.

26. The apparatus of claim 25 capable of carrying out at least one of adding, removing and altering data from any of data in and data around the selection, wherein the data consists of at least one of the group consisting of:

(a)JavaScript

(b)VB Script

(c)Ecma Script

(d)links

(e)color

(g)images

(h)sounds

(i)multimedia

(j)fonts

(k)Flash

(l)tags

(m)pop-up menus

(n)pop-up windows.

27. The apparatus of claim 19 wherein the structured data is selected

from the group consisting of

        (a) image data,

        (b) sound data, and

        (c) multimedia data.

28. The apparatus of claim 27 wherein the data alteration consists of

altering a selection from the group consisting of:

        (a) the resolution of the data and

        (b) the compression of the data.

29.   The apparatus of claim 4 wherein the intercepting unit is

locatable on an intermediate network node, between the computer sending the

data and the computer receiving the data.

30.   The apparatus of claim 29, wherein said node is a gateway node.

31.   The apparatus of claim 29, wherein said node is a proxy node.

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32. The apparatus of claim 29, wherein said node is an ISP node.

33. The apparatus of claim 29 wherein the search and replace unit is operable to determine a structure of input data and to carry out a replacement within the framework of said determined structure.

34. The apparatus of claim 33 wherein the structure is a text data structure.

35. The apparatus of claim 34 wherein the data structure comprises content text, and tag, data.

36. The apparatus of claim 35 wherein the search and replace unit is operable to carry out at least one of adding, altering and deleting data found in any one of a group of data in and data around a selection from the group consisting of:

(a) the text and

(b)the tags.

37. The apparatus of claim 33 wherein said structure is one of a group consisting of:

(a) the SGML format

(b) the HTML format

(c) the XML format

(d) the XHTML format

(e) the WAP format, and

(f) SMTP.

38. The apparatus of claim 37 wherein the search and replace unit is operable to find a selection from the group consisting of words and tags, and is further operable to do at least one of add data, removing data and altering data, which can be found in and around said selection.

39. The apparatus of claim 15 capable of selectively doing at least one of adding, removing and altering data around and in the selection, wherein that data consists of a at least one of the group consisting of:

(a)JavaScript,

(b)VB Script,

(c)Ecma Script,

(d)links,

(e)color,

(g)images,

(h)sounds,

(i)multimedia,

(j)fonts,

(k)Flash,

(l)tags,

(m)pop-up menus, and

(n)pop-up windows.

40. The apparatus of claim 29 wherein the structured data is selected

from the group consisting of

        (a) image data,

        (b) sound data, and

        (c) multimedia data.

41. The apparatus of claim 40 wherein the data alteration consists of

altering a selection form the group consisting of:

        (a) the resolution of the data, and

        (b) the compression of the data.

42. A Server on a network with

(a) functionality to intercept data being sent,

        (b) memory for storing predetermined settings,

        (c) access functionality associated with said interception

functionality operable to access data within said intercepted

communication

        (d) a search and replace unit, associated with both said

interception unit and said access functionality being operable to

conditionally alter the intercepted communication in response to said

access data settings.

43. A data carrier carrying data usable in combination with a general

purpose computer to provide

(a) functionality to intercept data being sent,

(b) memory for storing predetermined settings,

(c) access functionality associated with said interception

functionality operable to access data within said intercepted

communication

(d) a search and replace unit, associated with both said

interception unit and said access functionality being operable to

conditionally alter the intercepted communication in response to said

access data and settings.

44.   A method for intercepting communications between a sender and

a receiver, and conditionally altering the intercepted data comprising:

(a) intercepting the communication,

(b) accessing data from within the intercepted communication,

(c) searching through and conditionally altering the communication and,

(d) forwarding said conditionally altered data on to the intended receiver.

45.   The method of claim 44 wherein the data within the intercepted

communication is a selection from the group consisting of:

(a) sender identification,

(b) information about the sender,

(c) receiver identification,

(d) information about the receiver, and

(e) data type information.

46.　　The method of claim 44 comprising intercepting a communication on a computer network.

47.　　The method of claim 46 wherein the sender of data and receiver of the communication are respectively remotely located.

48.　　The method of claim 47 comprising intercepting a communication from a packet-switched network.

49.　　The method of claim 48 comprising intercepting communication wherein said network is one of a:

(a) TCP/IP based network,

(b) UDP based transmission,

(c) ICMP based transmission,

(d) IGMP based transmission,

(e) TCP based transmission,

(f) mobile device based network,

(g) Ipv6 based network,

(h) Ipv4 based network, and

(i) an SMP based network.

50. The method of claim 49 comprising receiving message parts in separate packets and assembling said packets to form at least one entire message.

51. The method of claim 50 comprising detecting a data structure and altering data within in such a way as to conform to said detected structure.

52. The method of claim 51 comprising altering text data.

53. The method of claim 52 wherein the text data comprises content text, and tag data.

54. The method of claim 53 wherein conditionally altering comprises adding data around a selection from the text and the tags.

55. The method of claim 51, wherein the structure is any one of a selection from the group consisting of

(a) the SGML format

(b) the HTML format

(c) the XML format

(d) the XHTML format

(e) the WAP format, and

(f) SMTP.

56. The method of claim 55 wherein said searching through and conditionally altering comprises finding a selection from the group consisting of words and tags, and selectively carrying out at least one of adding, removing and altering data which is at least one of in, and data around said selection.

57.The method of claim 56wherein the data is selected from the group consisting of:

(a)JavaScript

(b)VB Script

(c)Ecma Script

(d)links

(e)color

(g)images

(h)sounds

(i)multimedia

(j)fonts

(k)Flash

(l)tags

(m)pop-up menus

(n)pop-up windows.

58.   The method of claim 44, wherein said step of conditionally altering comprises altering said communication in accordance with predetermined settings.

59.   The method of claim 44, wherein said step of conditionally altering comprises altering said communication in accordance with said accessed data.

60.   The method according to claim 44, wherein said conditionally altering comprises altering said communication in accordance with said accessed data taken together with pre-determined settings.

61   The method of claim 51 wherein the structured data is selected from the group consisting of

         (a) image data,

         (b) sound data. sound

         (c) multimedia data.

62. The method of claim 61 wherein the data alteration consists of altering a selection form the group consisting of:

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(a) the resolution of the data, and

(b) the compression of the data.